# G41M-VS

Intel® G41+ ICH7 Chipsets

ASRock®
www.asrock.com

## Product Brief

- Supports FSB1333/1066/800 MHz CPUs
- Supports Dual Channel DDR2 800
- Intel® Graphics Media Accelerator X4500, Pixel Shader 4.0, DirectX 10, Max. shared memory 352MB
- EuP Ready
- Supports ASRock Instant Boot, Instant Flash, OC DNA, ASRock OC Tuner (Up to 145% CPU frequency increase)
- Supports Smart BIOS, Intelligent Energy Saver (Up to 20% CPU Power Saving)

## Detail Specification

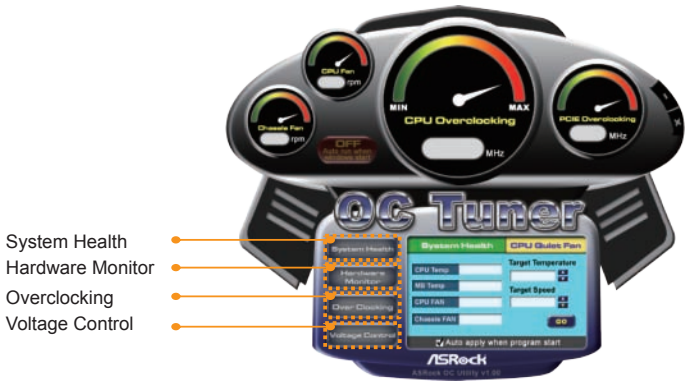
| | |
|---|---|
| **Platform** | - Micro ATX Form Factor: 8.8-in x 6.7-in, 22.4 cm x 17.0 cm |
| **CPU** | - LGA 775 for Intel® Core™ 2 Quad* / Core™ 2 Duo / Pentium® Dual Core / Celeron® Dual Core / Celeron®, supporting Dual Core Wolfdale processors<br>- Supports CPU power up to 65W<br>- Supports FSB1333/1066/800 MHz<br>- Supports Hyper-Threading Technology<br>- Supports Untied Overclocking Technology<br>- Supports EM64T CPU<br>* Supports CPU power up to 65W. Please refer to CPU support list for compatible CPU |
| **Chipset** | - Northbridge: Intel® G41<br>- Southbridge: Intel® ICH7 |
| **Memory** | - Dual Channel DDR2 memory technology<br>- 2 x DDR2 DIMM slots<br>- Supports DDR2 800/667 non-ECC, un-buffered memory<br>- Max. capacity of system memory: 8GB |
| **Expansion Slot** | - 1 x PCI Express x16 slot<br>- 1 x PCI slot |
| **Graphics** | - Intel® Graphics Media Accelerator X4500<br>- Pixel Shader 4.0, DirectX 10<br>- Max. shared memory 352MB |
| **Audio** | - 5.1 CH Windows® Vista™ Premium Level HD Audio (Realtek ALC662 Audio Codec) |
| **LAN** | - Realtek PCIEx1 LAN 8103EL / 8102EL<br>- Speed: 10/100 Ethernet<br>- Supports Wake-On-LAN |
| **Rear Panel I/O** | I/O Panel<br>- 1 x PS/2 Mouse Port<br>- 1 x PS/2 Keyboard Port<br>- 1 x Serial Port: COM1<br>- 1 x VGA Port<br>- 4 x Ready-to-Use USB 2.0 Ports<br>- 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED)<br>- HD Audio Jack: Line in / Front Speaker / Microphone |
| **Connector** | - 2 x SATAII 3.0 Gb/s connectors (No support for RAID and "Hot Plug" functions)<br>- 1 x ATA100 IDE connector (supports 2 x IDE devices)<br>- 1 x Print port header<br>- CPU/Chassis FAN connector<br>- 24 pin ATX power connector<br>- 4 pin 12V power connector<br>- Front panel audio connector<br>- 2 x USB 2.0 headers (support 4 USB 2.0 ports) |
| **BIOS Feature** | - 8Mb AMI BIOS<br>- AMI Legal BIOS<br>- Supports "Plug and Play"<br>- ACPI 1.1 Compliance Wake Up Events<br>- SMBIOS 2.3.1 Support<br>- VCCM, NB, VTT Voltage Multi-adjustment<br>- Supports Smart BIOS |
| **Support CD** | - Drivers, Utilities, AntiVirus Software (Trial Version) |
| **Unique Feature** | - ASRock OC Tuner<br>- Intelligent Energy Saver<br>- Instant Boot<br>- ASRock Instant Flash<br>- ASRock OC DNA<br>- Hybrid Booster:<br>  - CPU Frequency Stepless Control<br>  - ASRock U-COP<br>  - Boot Failure Guard (B.F.G.) |
| **Hardware Monitor** | - CPU Temperature Sensing<br>- Chassis Temperature Sensing<br>- CPU Fan Tachometer<br>- Chassis Fan Tachometer<br>- CPU Quiet Fan<br>- Voltage Monitoring: +12V, +5V, +3.3V, Vcore |
| **OS** | - Microsoft® Windows® 2000 / XP / XP 64-bit / Vista™ / Vista™ 64-bit / 7 compliant |
| **Certifications** | - FCC, CE<br>- EuP Ready (EuP ready power supply is required) |
| **Accessories** | - Quick Installation Guide, Support CD, I/O Shield<br>- ATA 100 Cable (Optional)<br>- 1 x SATA Data Cable (Optional) |

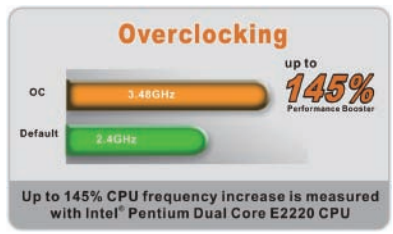
The specification is subject to change without notice. The brand and product names are trademarks of their respective companies. Any configuration other than original product specification is not guaranteed.

# Overclocking Design

## ASRock OC Tuner:

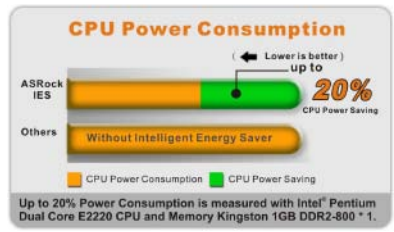
ASRock OC Tuner is a user-friendly and untied tool which allows you to guard your system by hardware monitor function and overclock your hardware devices to get the best system performance




## Energy Saving :

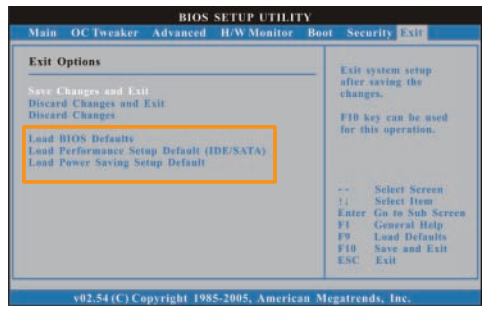
Supports ASRock Intelligent Energy Saver (I.E.S)


CPU Power Consumption
( Lower is better )
up to
20%
CPU Power Saving
ASRock IES
Others
Without Intelligent Energy Saver
CPU Power Consumption
CPU Power Saving
Up to 20% Power Consumption is measured with Intel® Pentium Dual Core E2220 CPU and Memory Kingston 1GB DDR2-800 * 1.

CPU Power saving up to **20%**

## Smart BIOS:

The Smart BIOS function can be found in the BIOS Setup Utility when you are setting up the optimal configuration for your system. It can facilitate the setting things by some default BIOS settings. Users may just select the BIOS mode that is most suitable to them.


BIOS SETUP UTILITY
Main OC Tweaker Advanced H/W Monitor Boot Security Exit
Exit Options
Save Changes and Exit
Discard Changes and Exit
Discard Changes
Load BIOS Defaults
Load Performance Setup Default (IDE/SATA)
Load Power Saving Setup Default
Exit system setup after saving the changes.
F10 key can be used for this operation.
Select Screen
Select Item
Enter Go to Sub Screen
F1 General Help
F9 Load Defaults
F10 Save and Exit
ESC Exit
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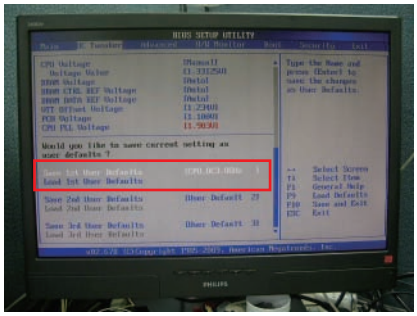
## OC DNA

Save your OC settings as a profile and share with friends. Try OC DNA now!

## OC DNA Instruction

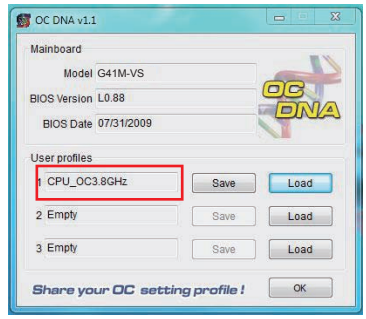
### Step 1

Save your BIOS OC settings as User Default in BIOS OC Tweaker menu. (For example: we name this User Default setting as “CPU_OC3.8GHz”)



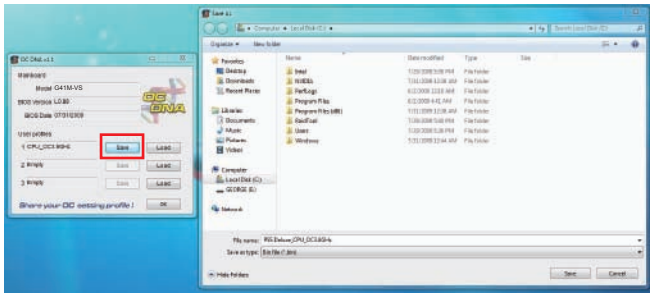
### Step 2

Execute ASRock OC DNA under OS, you will find “CPU_OC3.8GHz” as User Profile 1.




### Step 3

Press “Save” button to save the “CPU_OC3.8GHz” OC settings as a profile.

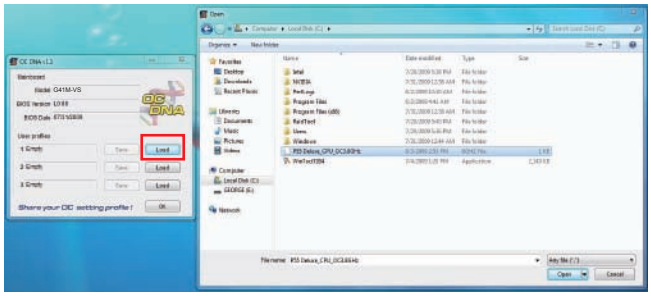


### Step 4

Send the “CPU_OC3.8GHz” profile to other friends.

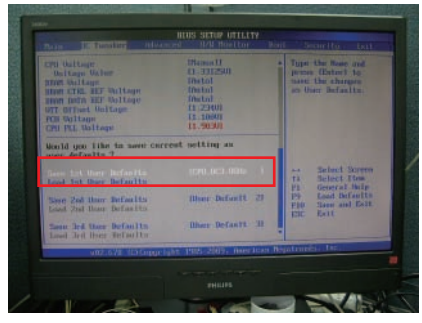
### Step 5

When the friend receives your “CPU_OC3.8GHz” profile, he can press “Load” to load the “CPU_OC3.8GHz” profile in OC DNA.



### Step 6

After that, the friend can enter into BIOS OC Tweaker menu to load the “CPU_OC3.8GHz” profile as his BIOS OC settings.



Now, you have successfully share your OC setting profile with your friends.

*The OC DNA works only when users use the same motherboard and BIOS version.

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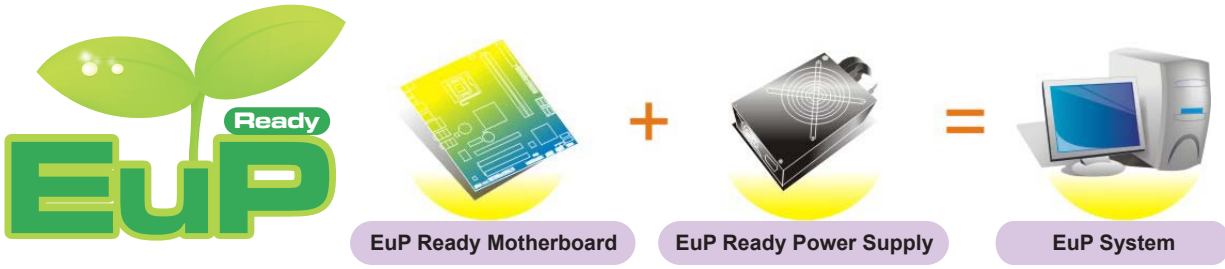



## What is EuP?

EuP, stands for Energy Using Product, was a provision regulated by European Union to define the power consumption for the completed system. With the great quantity and the popularly using of the electrical products nowadays and the continuously increasing of the electrical products categories in the following 20 to 30 years, European Union decided to establish an effective strategy to solve the energy consumption problem. That is, according to EuP, the total AC power of the completed system shall be under 1.00W in off mode condition.

## How to setup an EuP system?

To meet EuP standard, the EuP ready motherboard and the EuP ready power supply are required. As a motherboard vendor with eco-awareness, ASRock is the pioneer to develop “EuP Ready” motherboards based on the great efforts of our exceptional hardware design.
According to Intel, the EuP ready power supply must meet the standard of 5v standby power efficiency is higher than 50% under 100 mA current consumption. For EuP ready power supply selection, please check with the power supply manufacturer for more details.

## ASRock, Worldwide First EuP Ready Motherboard Manufacturer!

ASRock hereby proudly announced that we are the Worldwide First motherboard manufacturer to release “EuP Ready” motherboard to the market! With ASRock “EuP Ready” motherboard, you are confident to setup a system to pass the EuP standard.

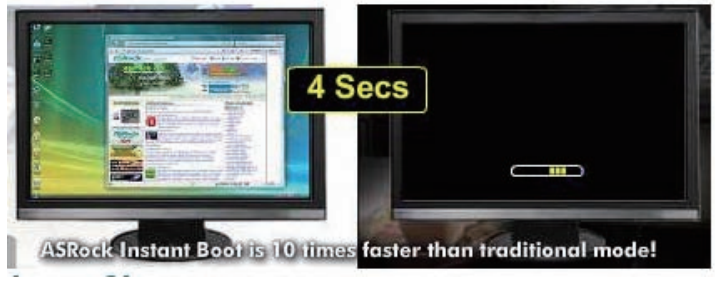
## ASRock Instant Boot

ASRock Instant Boot is a new feature invented exclusively by ASRock. It can boot up system in an amazing speed, which is 10 times faster than traditional boot up. For home users or office PC users, ASRock Instant Boot can also guarantee a clean Windows OS, and consumed less power! For details:
http://www.asrock.com/feature/InstantBoot/index.asp

* This function is applicable ONLY to single user that does not secure ID and Password to their systems.
* The boot up time depends on the hardware configuration.

## 10 Times Faster, Only 4 Secs to Boot Up to Windows!

**ASRock YouTube**
http://tw.youtube.com/watch?v=BucljXZVxXo



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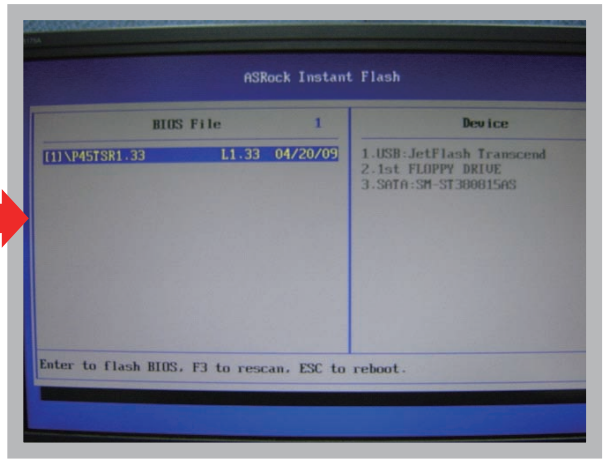
## ASRock Instant Flash

ASRock Instant Flash is an exclusive and the most user-friendly BIOS flash utility developed by ASRock. It is embedded in Flash ROM which is used to update the system BIOS without having to enter operating systems like MS-DOS or Windows.

Instant Flash BIOS Utility

## How to execute ASRock Instant Flash?

ASRock Instant Flash is extremely user-friendly. You can access Instant Flash utility directly by pressing F6 when you saw this page.




## Features

Once executing ASRock Instant Flash, the utility will automatically detect all devices such as USB, hard disk or even floppy drive to find the exact BIOS for your system. Instead of giving you all BIOS in your devices, the Instant Flash just list BIOS versions that apply to your motherboard model only. For example, if you have many different BIOS of different motherboards saved in your devices, but you just need to flash your P45 motherboard, the Instant Flash will just list the P45 BIOS versions for you. This unique function allows you to easily select the suitable BIOS version instead of browsing through all data.

**Instant Flash just list BIOS versions that apply to your motherboard model.**

**Simple**

**Click and start Flashing!**

**Quick!**